Employment of farmers' children in Karnal oil refinery

3323. SHRI MOHINDER SINGH LATHER: Will the Minister of PETROLEUM AND NATURAL GAS be pleased to refer to the answer to Unstarred Question 1592 given in the Rajya Sabha on the 8th August, 1988 and state:

(a) whether any reservation has been made for employment of the grown up children of the farmers whose land has been acquired for the Karnal refinery; if so, what are the details thereof; and

(b) what is the break-up of the employees of the Refinery recruited so far from within the State and from outside?

THE MINISTER OF STATE OF THE MINISTRY OF PETROLEUM AND NATURAL GAS (SHRI BRAHM DUTT): (a) and (b) The execution of Karnal refinery is at a preliminary stage and no policy for recruitment of personnel has been framed by the Joint Venture. No recruitment has so far been made for execution of refinery.

Request of Maharashtra State Electricity Board for Sanctioning gas for power generation

3324. SHRI PRAMOD MAHAJAN: Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

(a) what are the details of the requests made by Maharashtra State Electricity Board, Bombay Electric Suburban supply Ltd and Tata's to the Central Government for sanctioning gas to be used for power generation; and

(b) what decision the Central Government have taken in the matter?

THE MINISTER OF STATE OF THE MINISTRY OF PETROLEUM AND NATURAL GAS (SHRI BRAHM DUTT): (a) The Maharashtra State Electricity Board have requested for gas for installation of a 900 MW Gas Turbine. The Bombay Sub-urban Electric Supply Ltd. have also requested for gas for installation of a 500 MW power station at Dahanu. A request from M/s. TEC has also been received for gas for power generation.

(b) Initially gas was being supplied to MSEB and TEC on fall-back basis at about 3.5 MMCMD each. With the increased availability of gas, firm commitments of 300 MMCMD to MSEB and 1.5 MMCMD to TEC has been made. As the available gas at Urban has already been committed to various consumers, it would not be possible to make additional commitments of gas at present.

Energy produced through non-conventional sources

3325. SHRI P. N. SUKUL: Will the Minister of ENERGY be pleased to state:

(a) what steps are being taken to produce energy through non-conventional sources keeping in view the uncertainly of water level in hydro-electric projects and the cost factor in relation to production of energy in the thermal plants;

(b) what is the quantity of energy being produced through non-conventional sources during the last two years; year-wise; and

(c) what is the quantity of such energy anticipated to be produced during the current financial year?

THE MINISTER OF ENERGY (SHRI VASANT SATHE): (a) A comprehensive programme for production of energy though non-conventional sources such as solar thermal solar photovoltaic, wind energy, bio-gas, biomass etc. is being implemented by the Department of Non-Conventional Energy Sources in association with the State Governments/nodal agencies, pubiic institutions and voluntary organisations throughout the country. These programmes are being extended throughout the country to the extent financial resources are available.

(b) About 45 lac units of electricity in 1986-87 and about 48 lac units of electricity in 1987-88 have been fed to the State grids from wind farm projects. In other programmes such as solar energy, bio-gas, biomass and solar sources, energy equiva-

lent to about 41 × 108 kwh in 1986-87 and about 49 × 108 kwh in 1987-88 is estimated to have been generated/saved. Also through the Improved Chulhas programme about 20 lac tonnes of fuel wood in 1986-87 and about 30 lac tonnes of fuel wood in 1987-88 have been saved. Several thousand megawatts of electricity can be provided with relatively short gestation from non-conventional sources if financial resources are made available.

(c) During current financial year it is expected that 65 lac units of electricity would be fed from the wind farm projects to the state grids. In other programmes energy equivalent to about 57×108 kwh is expected to be generated during the current financial year. Through the Improved Chulhas programme, it is expected that an annual saving of 42 lac tonnes of fuel wood would take place in the country.

Electricity connections to unauthorised encroachers of Government Land near Rampura Railway Crossing

3326. SHRI MUKHTIAR SINGH MALIK: Will the Minister of ENERGY be pleased to state:

(a) whether it is a fact that Delhi Electricity Supply Undertaking (DESU) have provided electricity connections illegally to unauthorised persons who have encroached Government land near Rampura Railway Crossing, near the Community Centre to enable them to run their commercial business;

(b) if so, what are the reasons therefor; and

(c) whether Government propose to investigate as to how electricity connections have been given to the unauthorised encroachers by DESU and disconnect all such illegal electric connections and if not, what are the reasons therefor?

THE MINISTER OF STATE IN THE DEPARTMENT OF POWER IN THE MINISTRY OF ENERGY (SHRI KALPNATH RAI): (a) to (c) The information is being collected and will be laid on the Table of the House.

Popularising photo-voltaic energy

3327. SHRI SURENDRA SINGH THAKUR: Will the Minister of ENERGY be pleased to state:

(a) whether Government have made efforts to popularise photo-voltaic cells to tap solar energy for various uses;

(b) if so, what are the details thereof; and

(c) what efforts have been made by Government to make photo-voltaic cells economical and cheaper?

THE MINISTER OF ENERGY (SHRI VASANT SATHE): (a) and (b) The Department of Non-Conventional Energy Sources is implementing a country wide programme for the popularisation and deployment of solar photovoltaic systems designed to meet a variety of electrical energy requirements. Among the applications which have been successfully demonstrated are water pumping for drinking water supply and micro irrigation, street lighting, lighting in community installations, television, battery charging, power supply for off-shore oil platforms, microwave repeater stations, rural telephone exchanges, etc. The programme is being implemented with the involvement of various agencies of the Central and State governments such as the Rural Electrification Corporation, State Electricity Boards, Railways, Defence and Paramilitary Forces, etc. Over 3,000 villages have been provided with photovoltaic powered street lights, as a measure of initial electrification. Installation of lighting systems in community centres, panchayat ghars, adult education centres and provision of community television sets in such places has also been taken up. Small solar power stations have also been set up in a few unelectrified villages on an experimental basis.

(c) Solar cells and modules being made in the country are based on single crystal silicon technology. Various reasons including the present technology, impact of